

Notice of Allowability

Application No.

10/649,954

Examiner

Huedung X. Cao

Applicant(s)

CHOI, TAE-KYU

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment, filed on 11/18/05.
2. ☒ The allowed claim(s) is/are 8-11, 14-21 and 24-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

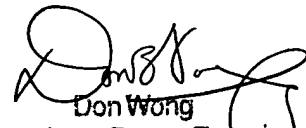
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 12/06/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


Don Wong
Supervisory Patent Examiner
Technology Center 2809

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Daniel Y.J. Kim (Registration No.36,186) on 01/30/2006.

The application has been amended as follows:

Please cancel claim 22.

In claim 8: An [active] antenna system of a radio communication terminal comprising:

an antenna that transmits and receives a communication signal to and from a communication node;

a sending end amplifying/filtering unit that amplifies and filters the communication signal to be transmitted through a duplexer;

a receiving end amplifying/filtering unit that amplifies and filters the communication signal received through a duplexer;

a closed loop control circuit that generates a control signal according to power of a communication signal output from sending end amplifying/filtering unit; and

a bias unit that separated the communication signal and a power transmitted from a radio communication terminal through a transmission line,

wherein the receiving end amplifying/filtering unit includes a variable amplifier that amplifies a reception communication signal as much as a variable gain according to a control signal, and

wherein the closed loop control circuit comprises:

a coupling unit that branches a transmission output from a final end of the sending end amplifying/filtering unit; and

a detection controller that generates a control signal according to a strength of power of the branched transmission output and applying the control signal to the variable gain amplifier.

Examiner's Statement of Reasons for Allowance

1. Claims 8-11, 14-21, and 24-26 are allowed.

2. The following is an examiner's statement of reasons for allowance:

The prior art made of record fails to anticipate or make obvious the claimed invention. Specifically, the prior art fails to teach, in combination with the remaining elements as recited in claims 8, 15, and 24:

The present invention is directed to an active antenna system of radioa communication terminal. dielectric resonator package.

Regarding claims 8, 15, and 24, the Prior Art fails to teach that, the receiving end amplifying/filtering unit includes a variable amplifier that amplifies a reception RF signal as much as a variable gain according to a control signal, where a closed loop control circuit comprises a coupling unit that branches a transmission output from a final end of the sending end amplifying/filtering unit; and a detection controller that generates a control signal according to a strength of power of the branched transmission output and applying the control signal to the variable gain amplifier, and a bias unit that separates the communication signal, a power and a control signal transmitted from the radio communication terminal through a transmission line, and wherein the control signal is applied to at least one of the sending and receiving end amplifying/filtering units to adjust a corresponding amplifier gain.

Claims 9-11, 14, and 21 are allowed for depending on claim 8.

Claims 16-20 are allowed for depending on claim 15.

Claims 25-26 are allowed for depending on claim 24.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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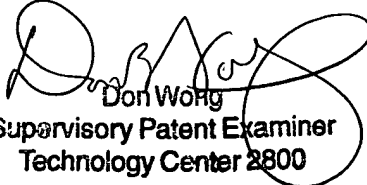
Inquiries

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huedung Cao whose telephone number is (571) 272-1939.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huedung Cao
Patent Examiner


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